TOZT30 DEHOZ3S9

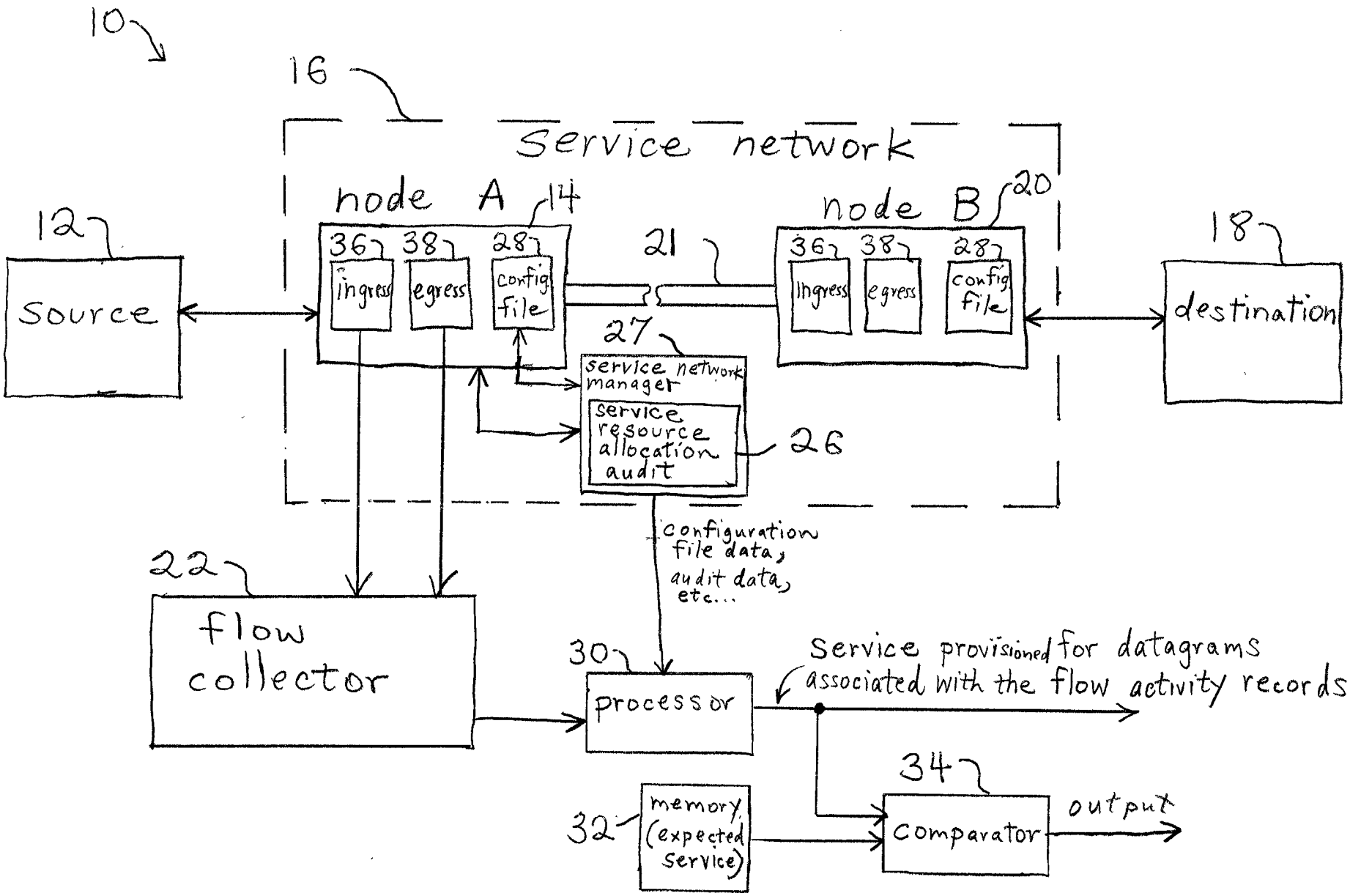


FIG. 1

24 → time stamp data

Flow activity records

| start time | end time or duration | flow descriptor | service identifier | service provisioned |
|---|---|---|---|---|
| $t_1$ | | $fd_1$ | $SI_{1i}$ $SI_{1e}$ | $SP_{1i}, SP_{1e}$ |
| $t_2$ | | $fd_2$ | $SI_{2i}, SI_{2e}$ | $SP_{2i}, SP_{2e}$ |
| ⋮ | | ⋮ | ⋮ | |
| $t_n$ | | $fd_n$ | $SI_{ni}, SI_{ne}$ | $SP_{ni}, SP_{ne}$ |

FIG. 2

Service resource allocation audit (dynamic service network)

time stamp data

| start time | end time or duration | service identifier | service provisioned |
|---|---|---|---|
| $t_1$ | | $SI_1$<br>$SI_2$<br>⋮<br>$SI_n$ | $SP_1$<br>$SP_2$<br>⋮<br>$SP_n$ |
| $t_2$ | | $SI_1$<br>$SI_2$<br><br>$SI_n$ | $SP_1$<br>$SP_2$<br>⋮<br>$SP_n$ |
| $t_3$ | | $SI_1$<br>$SI_2$<br>⋮<br>$SI_n$ | $SP_1$<br>$SP_2$<br>⋮<br>$SP_n$ |

26 ↙

FIG. 3 (PRIOR ART)

Configuration File (non-dynamic service network)

28 →

| service identifier | service provisioned |
|---|---|
| $i_1$ | $SP_1$ |
| $i_2$ | $SP_2$ |
| ⋮ | ⋮ |
| $i_n$ | $SP_n$ |

FIG. 4 (PRIOR ART)

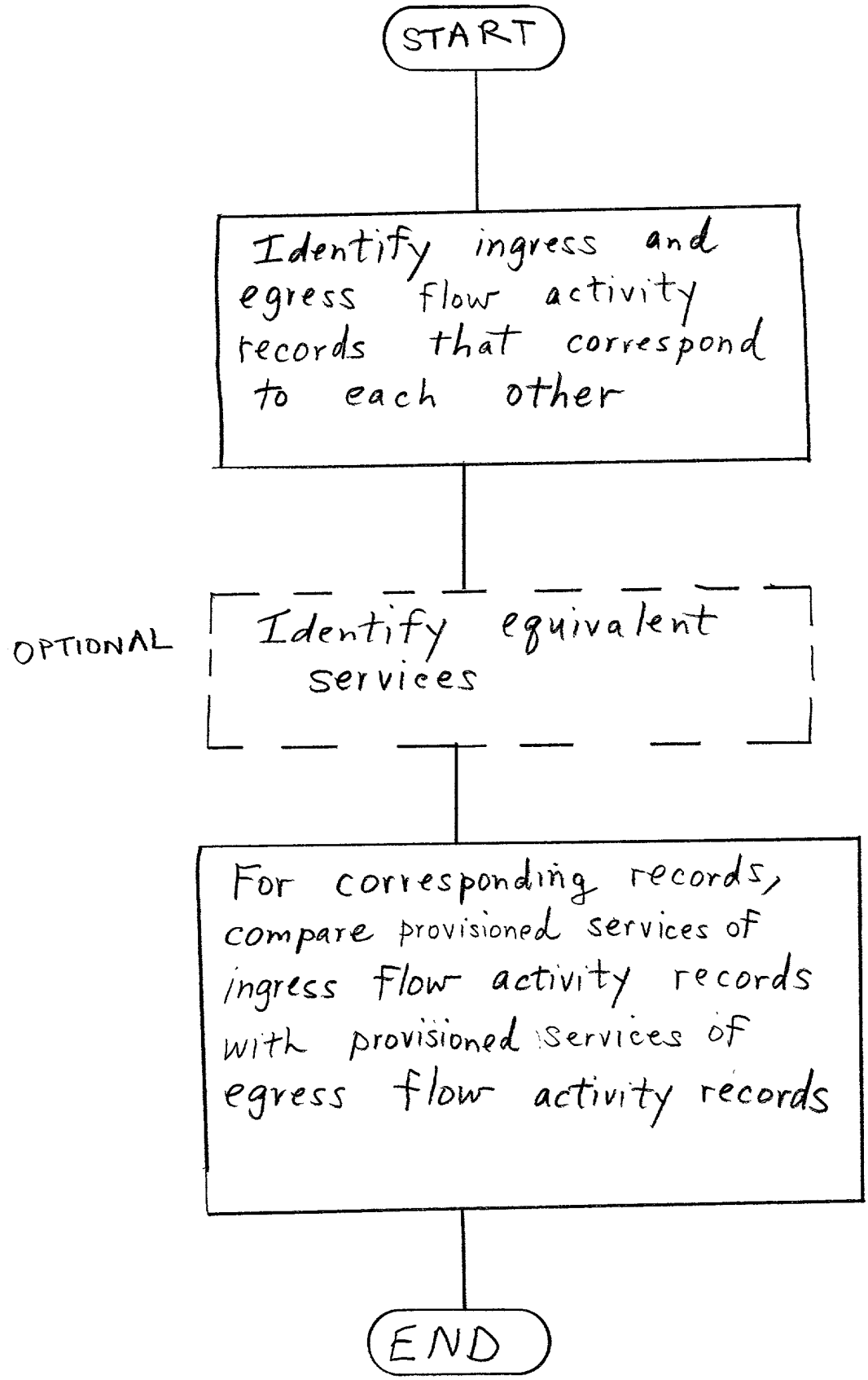
START
Identify ingress and egress flow activity records that correspond to each other
OPTIONAL
Identify equivalent services
For corresponding records, compare provisioned services of ingress flow activity records with provisioned services of egress flow activity records
END

FIG. 5

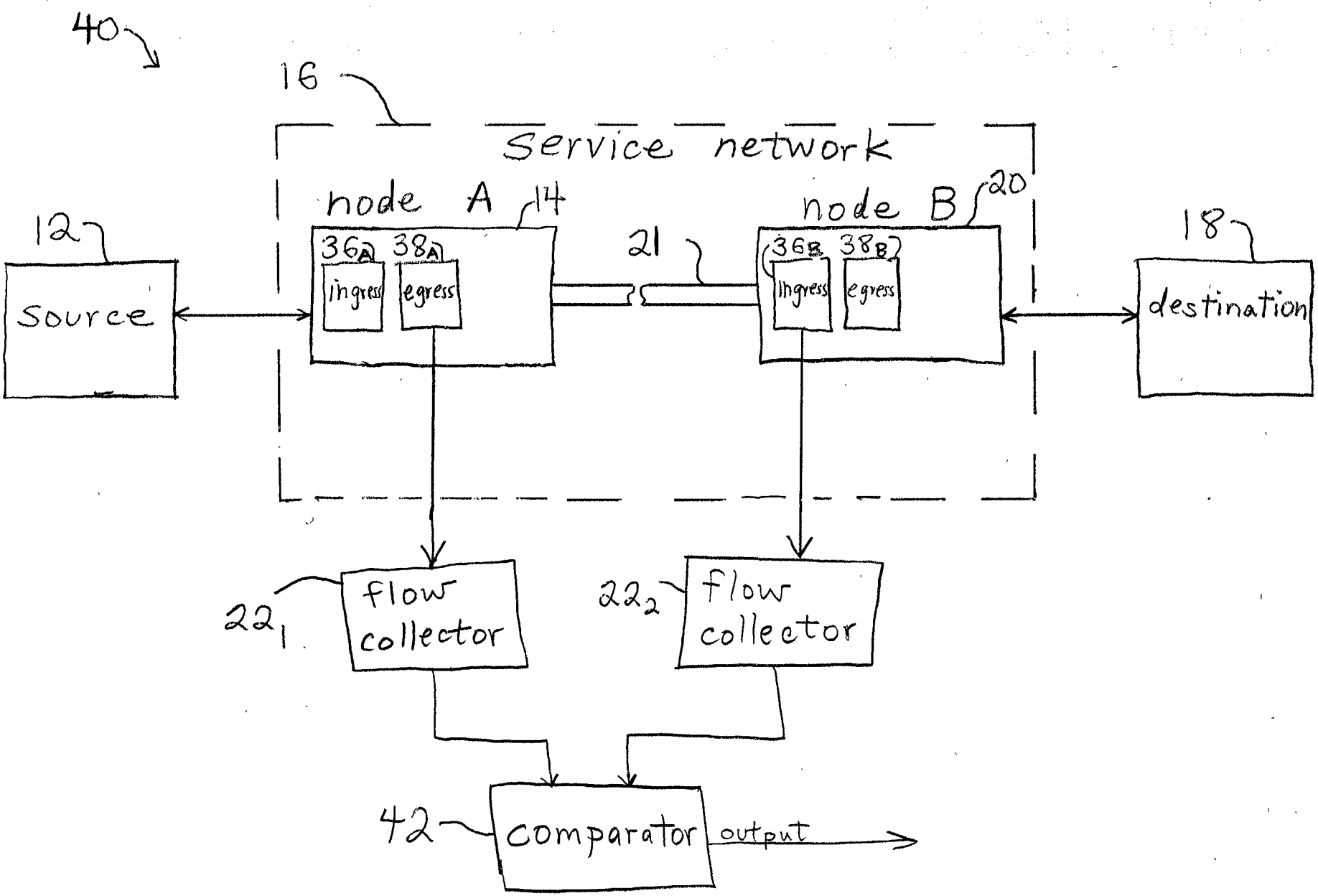
40
16
service network
node A
14
node B
20
12
18
source
36A
38A
ingress
egress
21
36B
38B
ingress
egress
destination
22 1
flow collector
22 2
flow collector
42
comparator
output

FIG. 6

44

Flow activity records

| Time stamp: start time | Time stamp: end time or duration | flow descriptor | service label | service provisioned |
|---|---|---|---|---|
| $t_1$ | | $fd_1$ | $SL_1$ | $SP_1$ |
| $t_2$ | | $fd_2$ | $SL_2$ | $SP_2$ |
| ⋮ | | ⋮ | ⋮ | ⋮ |
| $t_n$ | | $fd_n$ | $SL_n$ | $SP_n$ |

FIG. 7

service label File of lookup facility

| service label | service provisioned |
|---|---|
| $SL_1$ | $SP_1$ |
| $SL_2$ | $SP_2$ |
| ⋮ | ⋮ |
| $SL_n$ | $SP_n$ |

FIG. 8

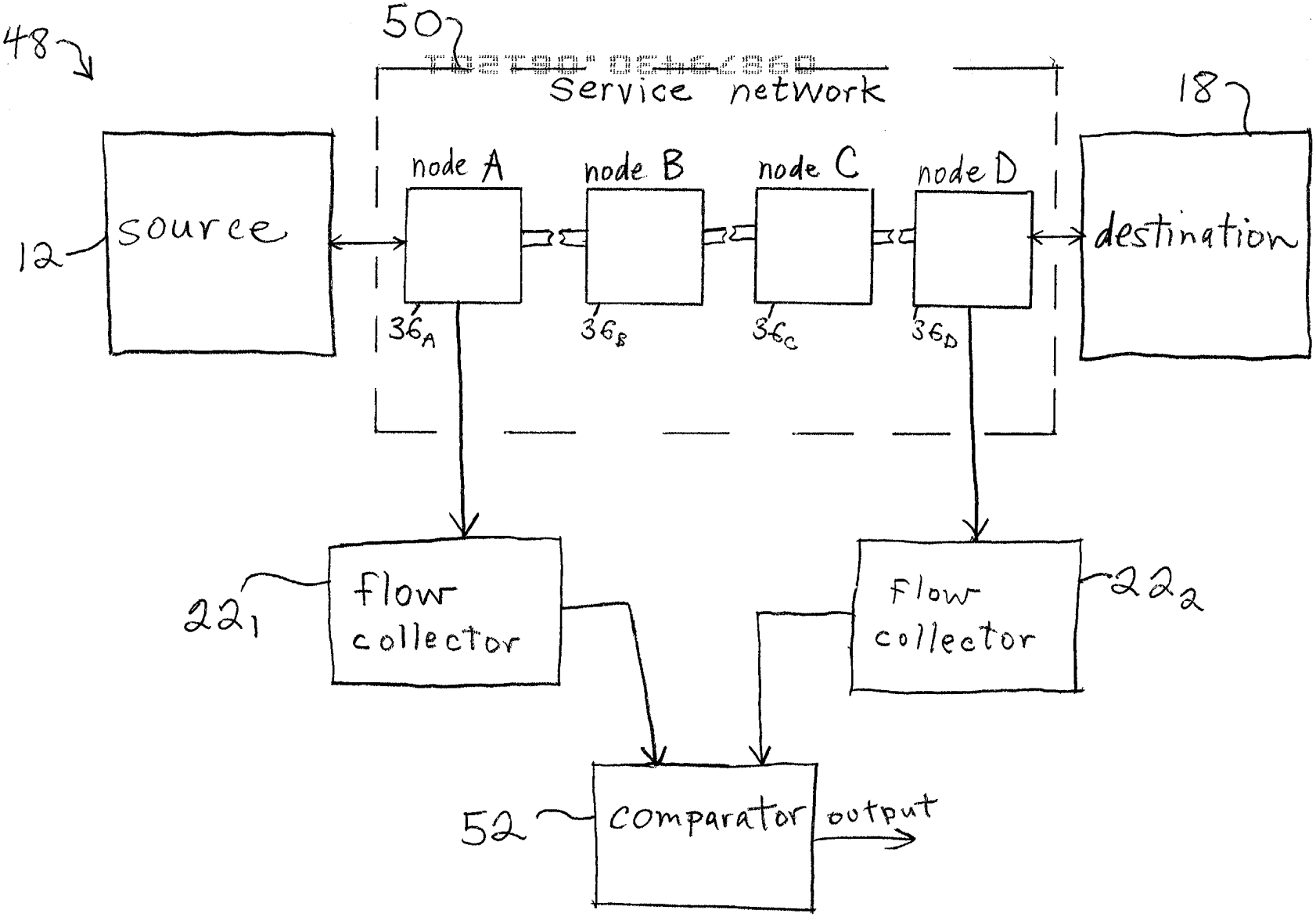
48
50
Service network
18
node A
node B
node C
node D
12
source
destination
$36_A$
$36_B$
$36_C$
$36_D$
$22_1$
flow collector
flow collector
$22_2$
52
comparator
output

FIG. 9

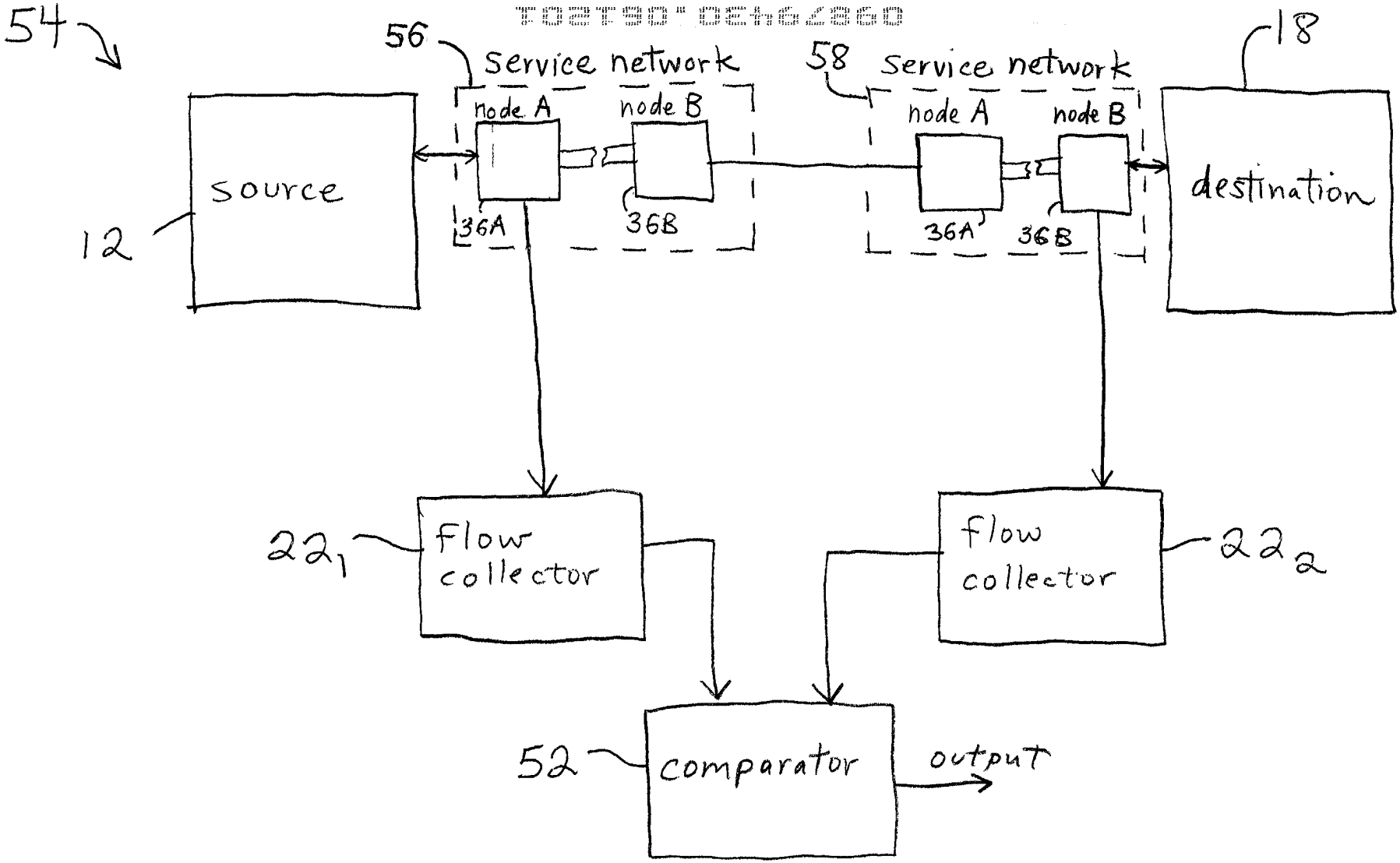
54
56
Service network
58
Service network
18
node A
node B
node A
node B
source
12
36A
36B
36A
36B
destination
Flow collector
$22_1$
flow collector
$22_2$
52
comparator
output

FIG. 10

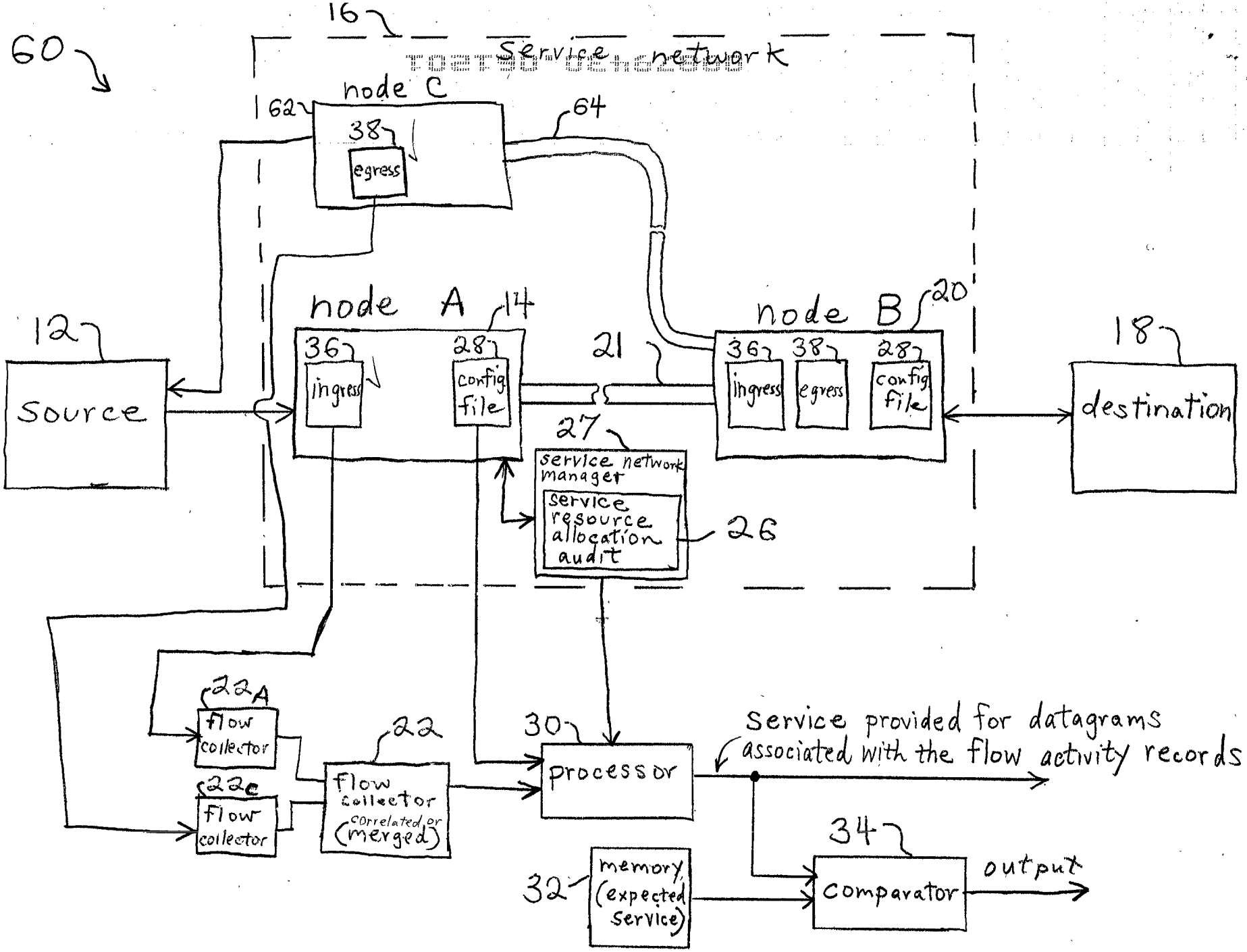
60
16
service network
node C
62
64
38
egress
node A
14
node B
20
12
18
source
36
ingress
28
config file
21
36
ingress
38
egress
28
config file
destination
27
service network manager
service resource allocation audit
26
22A
flow collector
22C
flow collector
22
flow collector (correlated or merged)
30
processor
Service provided for datagrams associated with the flow activity records
34
comparator
output
32
memory (expected service)

FIG. 11